UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,174	02/25/2002	Vinay Vasant Kulkarni	P8005	5123

24739 7590 06/18/2007		EXAMINER
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ART UNIT	PAPER NUMBER
2193	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/083,174	KULKARNI ET AL.
	Examiner	Art Unit	
	Todd Ingberg	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2007*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date. _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claims 1 – 11 have been examined.

Claims 1 and 8 have been amended.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1, 3 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batch as

taught by "Not a Batch Language : A Control Language!", E.H.Bristol, published May 1995 in

view the implementation of the methodology of Object Oriented as taught by Object-Oriented

Modelling and Simulation of Batch Plants (Wollhaf et al) from November 1995.

Claim 1
Batch teaches a software instance operating on a computer platform including a model
framework for specifying a purpose-specific batch programs (Batch, page 2 – object oriented –
by definition supports instances and Role of Graphics for framework support also see page 3)
comprising: an extensible code library (Wollhaf, OO Batch), an abstraction representing a batch
program(Batch, page 5, Figure 3b and page 8 Figure 5); an abstraction representing a batch
function of the program(Batch, page 12, operations); an abstraction representing operation of the
function (as per above); an abstraction representing a data provider to the function (Operations
above the operation often called a getter should be well known) ; and an abstraction representing
a context class of the function (Batch, as defined by the meta model provided by Inheritance, see
page 2); characterized in that an instantiation process of the models is initiated with appropriate
input data parameters input to each abstraction generating appropriate instances of batch
functions and function operations wherein the generated instances are executable as part of a run
sequence of the purpose-specific batch program (Batch, instantiating an object based on the class
structure as taught on page 2 and the variables of the object as defined on page 7 and Wollhaf,
Chemical plants etc)). Batch teaches modeling batch programs using an Object Oriented
Methodology. Wollhaf teaches the Object-Oriented modeling for a specific purpose of batch

plants and the implementation of modeling (code library required to perform OO modeling) and the implementation of simulation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Batch and Wollhaf, because Object technology provides a high degree of reuse with extensible code libraries.

Claim 3
The model framework of claim 1 wherein instantiation creates user-instance functions that are operationally linked and together define a user-instance of batch program. Interpreted to be the user defines object by interacting with the object oriented framework of claim 1 – intended use of Batch)

Claim 4
The model framework of claim 3 wherein code required to generate the user instance functions defining the program is automatically generated by the model as a result of data input and subsequent instantiation. (Interpreted to be the instantiation of an object is based on the class structure as per claim 1).

Claim 5
The model framework of claim 1 wherein the data provider obtains its data from a database by query.
Interpretation
A file system can be interpreted as a database. The ability to use messages to access data meets the limitations in the broadest reasonable interpretation (Batch, page 3 Table 1 – Messages/Calls – Data Access).

Claim 6
The model framework of claim 1 wherein one batch function indicates if memory management should be provided. Instantiating an object performs an allocation of memory and meets the limitations in the broadest reasonable interpretation.

Claim 7
The model framework of claim 1 wherein the class encapsulates restart information and information passed between different operations. (Batch, page 3, bullet 3 – On, Off etc).

Claim 8
Batch anticipates a method for developing an executable batch program through model instantiation (Batch, page 2, Introduction and Potential for Objects in Control) comprising steps of
(a) providing an executable model abstraction (Batch, page 3 – bullet items) including program (Problem being solved – Production system in article), function (Batch, method, page 3), class (Batch, page 3 – top), data provider (Batch, message page 3), and operation objects (Batch, methods as per above);
(b) inputting data into the model abstraction, the input data defining a user instance class of batch program (Bullet items as per above to model behaviors);

(c) instantiating the model abstraction (Batch, page 3, Process middle of page);

(d) generating code within the model abstraction, the code defining user instances of batch functions including operations and execution orders (Batch, inheritance model of class classes as per page 2); and

(e) compiling the generated code to build the user instance batch program(Batch, page 10, Translation and pages 13 – 14 for support of tasks).

Claim 9
The method of claim 8 wherein the model comprises a meta model framework.
Class inheritance is the meta model (Batch, page 2, class structure and inheritance)

Claim 11
The method of claim 8 wherein in steps (d) and (e) are automated. (Batch, Abstract – the purpose of the language).

Claim Rejections - 35 USC § 103

3.   Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batch as

applied to claims 1 and 8 above in view of UML as taught by Integrating UML Diagrams for

Production Control Systems by Hans J. Kohler et al, ACM, 2000 and by Object-Oriented

Modelling and Simulation of Batch Plants (Wollhaf et al) from November 1995.

Claim 2
The model framework of claim 1 wherein modeling language is unified modeling language.

Claim 10
The method of claim 8 wherein instep (a) the code is UML language.

Rejection for Claims 2 and 10

Batch teaches the implementation of a meta model for implementing object oriented

framework in a Batch environment (Batch, page 14). However, Batch does not limit the

implementation to the use of Unified Modeling Language. It is UML who teaches UML for

production control systems (UML, Abstract). Wollhauf teaches simulation and modeling of

batch plants. Therefore, it would have been obvious to one of ordinary skill in the art to combine
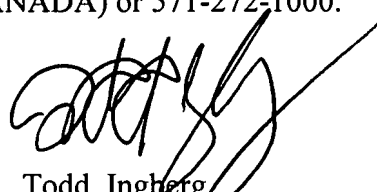
the teachings of Batch, UML and Wollhauf, because the ability to produce modeling with UML

would provide a model using a commonly used modeling language thus reduce employee

learning and save time and money.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The

examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Todd Ingberg
Primary Examiner
Art Unit 2193

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